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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/482,933	06/07/1995	M. ALLEN NORTHRUP	07043/015002	2880

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WASHINGTON, DC 20004

EXAMINER

MARSCHEL, ARDIN H

ART UNIT	PAPER NUMBER
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1631

DATE MAILED: 05/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
08/482,933

Applicant(s)
Northrup et al.

Examiner
Ardin Marschel

Art Unit
1631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Apr 3, 2001
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 81-87 and 93-106 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 81, 82, 86, 87, and 93-106 is/are rejected.
- 7) ☒ Claim(s) 83-85 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Jun 7, 1995 is/are a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s): _____
- ☒ Interview Summary (PTO-413) Paper No(s). 32
- ☐ Notice of Informal Patent Application (PTO-152)
- ☒ Other: Attachment for PTO-948

The suspension of prosecution, mailed 10/1/02, is hereby withdrawn. Said withdrawal of suspension is hereby entered so that the below newly applied issues may be addressed.

As a first issue, the request for Interference, filed 10/5/98 (Cert. of Deposit on 9/30/98), is noted. Due to the greater than 3 month time period between the filing dates of the potentially interfering parties and due to an indication that the instant application would be the junior party, a submission under 37 CFR § 1.608(b) is required for such a request to be further considered. Applicants have acknowledged this in their last page 15 of said submission, filed 10/5/98. It is further noted that applicants submission, filed 4/3/01, stated that Declarations filed under 37 CFR § 1.131 are in response to this requirement for a submission under 37 CFR § 1.608(b) but did not specify the entirety of what is meant as said submission nor that the submission, filed 4/3/01, was a submission under 37 CFR § 1.608(b) per se. This insufficiency has resulted in the repeat of the rejections as reiterated below.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or

on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 81, 82, 87, and 93-106 are rejected under 35 U.S.C.

§ 102(e) as being clearly anticipated by Wilding et al. (P/N 5,498,392).

Wilding et al. disclose the preparation and use of microfabricated amplification devices for PCR usage as summarized in the abstract and throughout its specification. Figures 10-12 and the associated description in columns 7-15, especially disclose inlet ports, reaction chambers, PCR reagents, etc. These devices are primarily manufactured out of silicon as disclosed in column 3, lines 61-66. Electrical heaters of various types may be fabricated in the substrate as described in column 4, lines 29-44. A detection chamber of the reference may include a window for spectrophotometer reading as described in column 4, line 65, through column 5, line 4. These disclosures anticipate the above listed claims.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103(a).

Claims 81, 82, 86, 87, and 93-106 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wilding et al. (P/N 5,498,392), taken in view of Hafeman et al. (Science 240:1182[1988]).

This rejection is directed to claim embodiments corresponding to the semiconductor wafer limitation of instant claim 86.

Wilding et al. has been summarized above but lacks a semiconductor material description for its microfabricated device practice. In column 3, lines 61-66, Wilding et al. does, however, motivate and suggest micromachining methods as applicable for device fabrication.

Hafeman et al. in the abstract describes semiconductor devices (LAPS as Light-addressable Potentiometric Sensor devices) as being utilized for a multiplicity of chemical events. Further, on page 1183, second column, and on enzyme reactions are suggested on such devices. A copy of Hafeman et al. is not included with this action because it was reprinted on pages 438-441 within a reference already cited by applicants given as Muller et al., Microsensors (1990).

Thus, it would have been obvious to someone of ordinary skill in the art at the time of the instant invention to utilize various microfabrication materials which may be of the silicon type or more generically semiconductor material for microsensor fabrication because Wilding et al. suggests and motivates micromachining or microfabrication of devices therein described and Hafeman et al. includes semiconductor materials in the art of microsensor manufacture in microdevices such as using enzyme assay based reactions.

Claims 83-85 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

No claim is allowed.

TWO ADDITIONAL FORMAL MATTERS HAVE BEEN FOUND

1) A review of the papers in the instant file has revealed the lack of a copy of a letter from applicants regarding references, apparently filed 2/5/98. Applicants are requested to submit a copy to complete the PTO file record regarding this submission.

2) It has been found that there has been no corrected formal drawings filed in response to the PTO Form 948, mailed with the Office action, mailed 3/31/98 (Paper No. 8). Applicants are hereby also informed of the requirement to correct drawing deficiencies via the attached "Attachment for PTO-948" requiring drawing corrections within the time period set in the attached Office communication. Failure to fully respond to this requirement may result in a Notice of Non-responsive amendment or a Notice of Abandonment, as appropriate.

THIS ACTION IS MADE FINAL. Applicants are reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 CFR § 1.6(d)). The CM1 Fax Center number is either (703)308-4242 or (703)305-3014.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ardin Marschel, Ph.D., whose telephone number is (703)308-3894. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, Ph.D., can be reached on (703)308-4028.

Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instrument Examiner, Tina Plunkett, whose telephone number is (703)305-3524 or to the Technical Center receptionist whose telephone number is (703)308-0196.

May 27, 2003

Ardin H. Marschel
ARDIN H. MARSCHEL
PH.D.